

into three primary colors by a filter screen in front of the lens and then these have been caught by minute lenses on the celluloid strip before reaching the sensitive surface of silver salts. The filter is striped in red, green and blue so the ray of light reflected from each point of the surface of the object photographed is sifted out or allowed to pass through this tri-color screen in accordance with the proportion of the particular color it carries.

Next the light, now split up into three bands of color, strikes the film, but from what we should call "the wrong side," for the sensitive coating is behind. The celluloid side in front has been embossed with a series of little cylindrical lenses, ridges as it were, running lengthwise of the ribbon of film. These catch the colored rays and form them on the sensitive emulsion of the other side. So we finally have a film in which the original scene in front of the camera is represented in miniature by dots or lines side by side standing for its color components.

It is a sort of a camera inside a camera, for each tiny cylindrical line on the front of the film has taken a picture of the three parallel vertical strips of the filter in front of the camera. These lenses or corrugations on the film are so narrow as to be undiscernible with the naked eye. There are 559 of them in an inch-wide strip of film, some seven times as minute as the dots that make up our newspaper pictures.

When the film is projected by the reverse of the procedure by which it was taken, the picture on the screen really consists of red, blue and green points, but too small to be separable by the eye, so we see them as smooth and blended color. The machine, like the magician, moves quicker than the eye.

Broadcasting stations with a power of a million watts, twenty times as powerful as the fifty watt stations that are now the largest, are the next step in radio in the opinion of O. H. Caldwell, former Federal radio commissioner. This 1300 horse-power will soon be a regular thing. Such waves would reach out and overcome static and electrical noises and would be heard around the world.

ADDRESS OF WELCOME.

PRESIDENT KARL T. COMPTON, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

President Compton very cordially welcomed to M. I. T. the members of the New England Association of Chemistry Teachers and the Eastern Association of Physics Teachers.

He called attention to the extent to which engineering education, and in fact, the branches of engineering themselves, are simply specialized application of branches of Physics and Chemistry and to the fact that the rapidly increasing specialization in engineering makes it necessary in training of engineers to emphasize more and more the fundamental principles underlying science and engineering.

He made a plea for the teaching of both Chemistry and Physics primarily by the training in ability to apply principles rather than formulas, since the latter type of training, while making it easy to pass elementary examinations, proves to be a serious stumbling block in more advanced study and in real understanding.

He also gave a very interesting sketch of the plans for a new laboratory with some details of the very ingenious methods employed to secure rigidity and constant temperature.